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Title: Anthrosols and Monsoon Patinas: Space Imaging Applications

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The remains of Iron Age settlements were found recently in Dhofar, Oman, on the southern edge of the Rub al Khali. These sites were located by a combination of historical research and applications of space imaging technologies, in support of traditional archaeology. Research in Dhofar also focused on the range and distribution of such aromatics/succulents as frankincense and myrrh. To help locate sites and areas of archaeological and botanical interest, regional remote sensing image data were acquired, enhanced and studied. These data enabled us to eliminate large areas of arid landscape from consideration and helped target potential sites/ areas for investigation. Landsat images also revealed areas of distinct image tone which is caused by various types of rock coatings induced by the Southwest monsoon. These coatings may preserve a record of past frankincense and myrrh distribution. Finally ancient anthrosols, soils cultivated by people, can be detected by Landsat data. They have a distinct image signature due to the presence of gypsum. This development may also be an additional tool in locating potential sites.